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PENDING CLAIMS JULY 2000

WE CLAIM:

1. (Amended) A covalent HCV NS4A-NS3 complex comprising a central hydrophobic domain of native HCV NS4A peptide wherein the central hydrophobic domain comprises at least amino acid residues 22-30 of the native HCV NS4A peptide, a linker, and the HCV NS3 serine protease domain, wherein the hydrophobic domain of native HCV NS4A peptide is tethered by the linker to the amino terminus of the HCV NS3 protease domain.
2. (Amended) The covalent HCV NS4A-NS3 complex of claim 1, wherein the linker comprises at least 4 amino acid residues.
3. (Amended) The covalent HCV NS4A-NS3 complex of claim 2, wherein the linker consists of 4-6 amino acid residues.
4. (Amended) The covalent HCV NS4A-NS3 complex of claim 3, wherein the linker consists of about 4 amino acid residues.
5. The covalent HCV NS4A-NS3 complex of claim 4, wherein the linker has a sequence defined by SEQ ID NO: 21 or SEQ ID NO: 22.
6. The covalent HCV NS4A-NS3 complex of claim 5, having an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-20.
7. The covalent HCV NS4A-NS3 complex of claim 1 which is modified by replacement of one or more hydrophobic amino acid residues at position 17 or 18 of the HCV NS3 serine protease domain with a hydrophilic amino acid residue.
8. The covalent HCV NS4A-NS3 complex of claim 7 in which one or more isoleucine residues at position 17 or 18 of the HCV NS3 serine protease domain is replaced by a lysine residue.
9. The covalent HCV NS4A-NS3 complex of claim 8, having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-4, 6-8, 10, 12-14 and 16-18.

10. The covalent HCV NS4A-NS3 complex of claim 1 which is modified by replacement of a serine residue at position 139 of the HCV NS3 serine protease domain with an alanine residue.

- 5            11. The covalent HCV NS4A-NS3 complex of claim 10, having an amino acid sequence selected from the group consisting of SEQ ID NOs: 5-8, 15-18 and 20.

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